

21/38. The method claimed in claim 20, wherein said step of substituting includes substituting individual user data bits from said stream of user data bits into the LSB positions of said PCM samples.

39/22 The method claimed in claim 38, wherein said step of substituting includes substituting data bits in a sequential manner.

37/40. The method claimed in claim 20, wherein said step of providing PCM samples includes receiving a digital communication signal from a digital communication network and processing said digital communication signal using a de-vocoding algorithm.

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34/41. The method claimed in claim 20, wherein said step of providing a stream of data bits includes receiving a digital communication signal from a digital communication network and removing a system-native protection protocol from said digital communication signal.

42/25 The method claimed in claim 20, wherein said step of providing a stream of data bits includes providing a computer data file having data to be transferred to a remote location and reading said computer data file.

43/24 A computer readable medium having a program stored thereon for implementing the method claimed in claim 20 when executed within a digital processor.

44/27 A communication device having a digital processor and a computer readable medium, said computer readable medium having a program stored thereon for implementing the method claimed in claim 20 when executed within said digital processor.

Remarks

Claims 1-24 are pending in the application. Claims 1-4, 8-12, 15-18, and 21-24 stand rejected. The examiner has objected to claims 5-7, 13-14, 19 and 20 as being


dependent on a rejected base claim but allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

Applicants hereby amend claims 5, 6, 19 and 20 as suggested by the examiner, rewriting them in independent form and including all of the limitations of the corresponding base claim and any intervening claims. Applicants hereby amend claims 13 and 14 as suggested by the examiner, rewriting them in independent form and including all of the limitations of the corresponding base claim and any intervening claims, except that Applicants further amend these claims by: (i) making minor wording changes to the limitation set forth in original claim 11 to make this limitation more clear without changing its scope; and (ii) by deleting the limitations “first” and “second” set forth in the fifth and seventh lines, respectively, of original base claim 10. Support for deleting these limitations can be found, for example, in FIG. 2 and at page 5, line 20 through page 6, line 8. Applicants respectfully submit that claim 7 is allowable without amendment because it depends from claim 6, which is allowable as amended.

Applicants hereby cancel claims 1-4, 6-12, 15-18 and 21-24. Applicants hereby add new claims 25-44, each of which depends directly or indirectly from one of claims 5, 6, 13, 14, 19, or 20. Support for these new claims can be found, for example, in original claims 2, 6-9, 14, 16-18 and 20-24. Applicants respectfully submit that these new claims are allowable because each of them depends, directly or indirectly, from an allowable base claim.

Applicants respectfully submit that the application is in condition for allowance and respectfully request timely reconsideration thereof and prompt issue of a Notice of Allowance.

Respectfully submitted,

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Please amend the claims as follows:

5. (Amended) [The interworking subsystem claimed in claim 4, wherein:] An interworking subsystem for providing interoperation between a digital communication network and a public switched telephone network (PSTN), said interworking subsystem comprising:
- an input for receiving a first communication signal from the digital communication network;
- a de-vocoder for performing a de-vocoding operation on said first communication signal to generate a first output signal, wherein said first output signal includes a plurality of pulse code modulation (PCM) samples;
- a protocol termination unit for performing a protection protocol termination operation on said first communication signal to generate a second output signal, wherein said second output signal includes a stream of digital data bits; and
- a signal combiner for combining said first output signal and said second output signal into a composite signal for delivery to a destination user within the PSTN, wherein said signal combiner overlays said stream of digital data bits onto said plurality of PCM samples.
6. (Amended) [The interworking subsystem claimed in claim 4, wherein:] An interworking subsystem for providing interoperation between a digital communication network and a public switched telephone network (PSTN), said interworking subsystem comprising:

an input for receiving a first communication signal from the digital communication network;

a de-vocoder for performing a de-vocoding operation on said first communication signal to generate a first output signal, wherein said first output signal includes a plurality of pulse code modulation (PCM) samples;

a protocol termination unit for performing a protection protocol termination operation on said first communication signal to generate a second output signal, wherein said second output signal includes a stream of digital data bits; and

a signal combiner for combining said first output signal and said second output signal into a composite signal for delivery to a destination user within the PSTN, wherein said signal combiner inserts individual data bits from said stream of digital data bits into predetermined bit positions within the plurality of PCM samples.

13. (Amended) [The method claimed in claim 12, wherein:] A method for providing interoperation between a digital communication network and a public switched telephone network (PSTN), said method comprising:

receiving a system-native digital communication signal from the digital communication network;

processing the system-native digital communication signal using a de-vocoding routine to generate a first intermediate signal, wherein said first intermediate signal includes a plurality of pulse code modulation (PCM) samples;

processing the system-native digital communication signal using a

protocol termination routine to generate a second intermediate signal, wherein said second intermediate signal includes a stream of digital data bits; and

combining said first and second intermediate signals into a composite signal for delivery into the PSTN, wherein said step of combining includes distributing individual bits from said stream of digital data bits into predetermined bit positions within said PCM samples.

14. (Amended) [The method claimed in claim 12, wherein:] A method for providing interoperation between a digital communication network and a public switched telephone network (PSTN), said method comprising:

receiving a system-native digital communication signal from the digital communication network;

processing the system-native digital communication signal using a de-vocoding routine to generate a first intermediate signal, wherein said first intermediate signal includes a plurality of pulse code modulation (PCM) samples;

processing the system-native digital communication signal using a protocol termination routine to generate a second intermediate signal, wherein said second intermediate signal includes a stream of digital data bits; and

combining said first and second intermediate signals into a composite signal for delivery into the PSTN, wherein said step of combining includes inserting successive bits from said stream of digital data bits into least significant bit (LSB) positions of successive PCM samples.

19. (Amended) [The method claimed in claim 15, wherein:] A method for formatting data for delivery through a public switched telephone network (PSTN), comprising:

providing PCM samples, each of said PCM samples having a plurality of bit positions including a least significant bit (LSB) position, wherein said step of providing PCM samples includes acquiring an analog audio signal and sampling said analog audio signal at a predetermined sampling rate[.];

providing a stream of user data bits; and

substituting individual user data bits from said stream of user data bits into predetermined bit positions of said PCM samples before delivering said PCM samples through the PSTN.

20. (Amended) [The method claimed in claim 15, wherein:] A method for formatting data for delivery through a public switched telephone network (PSTN), comprising:

providing PCM samples, each of said PCM samples having a plurality of bit positions including a least significant bit (LSB) position, wherein said step of providing PCM samples includes generating dummy samples including simulated audio information[.];

providing a stream of user data bits; and

substituting individual user data bits from said stream of user data bits into predetermined bit positions of said PCM samples before delivering said PCM samples through the PSTN.